TABLE 1. Continuous Self-Consistent Basicity Scale of Neutral Bases in Acetonitrile

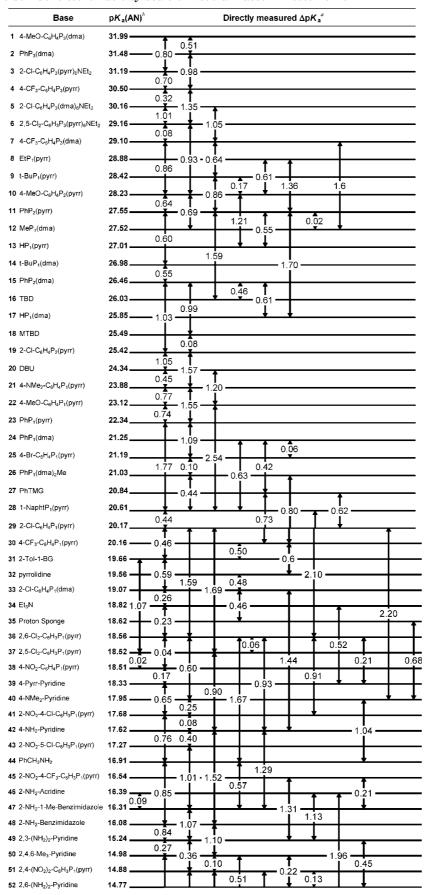


Table 1. (Continued)

Base	pK _a (AN) [/]	Directly measured ΔpK _a ^a									
3 2-NH₂-Pyridine	14.47	0.75	1	I	1	I		1	Ī		
4 2,6-Cl ₂ -4-NO ₂ -C ₆ H ₂ P ₁ (pyrr)			C).73	Ĺ]).74 -	1	- 0.35 -	Ţ		
5 4-MeO-Pyridine	14.23	\perp 1	 .55 –		Ľ		0.34	0.22			
6 3-NH ₂ -Pyridine	14.17		. <u>.</u>	0	.34		0.34				
7 2,6-Me ₂ -Pyridine	14.13		Ļ۵	f).06 —		↓	Ų.	0.05	,		
8 2,6-(NO ₂) ₂ -C ₆ H ₃ P ₁ (pyrr)	14.12	1.72	L	Ť	<u>↓</u>						
9 2-Me-Pyridine	13.32		<u> </u>								
0 Pyridine	12.53		77 •								
1 OEP	12.37 0.66	0.15 X									
2 4-MeO-Aniline	- 1	T 1. 0.83 —	01								
3 2-methylquinolin-8-amine	0.31 11.54	↓ ,									
4 N,N-Me ₂ -Aniline	0.07	f 1									
5 Aniline	0.77		15 —								
	10.62	T	15 — [
6 2-Me-Aniline	0.22			1	1	1	`				
7 TPP	10.41	1	1.5	58	一		_				
8 5-NO ₂ -Benzimidazole	10.39			\vdash	\dashv			<u> </u>	1		
9 TMP	10.15 0.43	0.85 —	47	\vdash	0.7	0.5	56 —	\vdash	-	1	
0 MePh₂P	9.96	+ -	i –	1.0	-	_	_	 90		0.23	
1 TCPP	9.94 0.03	+		1.0	$\stackrel{\prime}{+}$		0.	<u>۰</u> ۰	85 —	\vdash	
2 2-MeO-Pyridine	9.93			. .	\dashv	•		_	0.	o∪ ↓	0.0
3 1-Napht-NH ₂	9.77 9 .77	 0.	38 —		↓						0.32
4 3-CI-Pyridine	9.55 X	<u> </u>	⊢ 0.	33 —				ļ.,	, ,	,	
5 4-Br-Aniline	0.11 9.43	1.37 0.	12	Ļ							
6 2,4-F ₂ -Aniline	8.39	1	06	[
7 4-CF ₃ -Aniline	1.57	0.	35								
	8.03	1 1		75	0.1	7 '					
8 2-CI-Aniline	0.20	0.71 0. 	აი — [├ ^{1.7}	T	0.0	35				
9 3-NO ₂ -Aniline	7.68 X 0.01	1			— 0.1 	7 —	_				
0 4-F-3-NO ₂ -Aniline	7.67 X 0.05	† 0.	04 — I	Н	*	\rightarrow	0.	.07			
1 2,6-(MeO) ₂ -Pyridine	7.64	0.88	1	51 51	0.0	7 —		H			
2 PhP ₃	7.61	_	43	Ď 0.8	35 -	— 1.4	40 				
3 2-CI-Pyridine	6.79 1.40	+	 	┝┷							
4 4-NO ₂ -Aniline	6.22	0.57		<u> </u>			,				
5 2,5-Cl ₂ -Aniline	0.01 6.21	— 0.	25 —	<u> </u>							
6 Ph ₂ NH	0.25 5.97	1.16	— 1.	I 40 —							
7 2,6-Cl ₂ -Aniline	0.91 5.06	↓ ₁¹	[18 —	L							
		0.25	i								
8 2-NO ₂ -Aniline	4.80 1.30										

^a The numbers on the arrows are the experimental $\Delta p K_a$ values from this work and our previous works. ⁶⁻⁸ ^b Absolute $p K_a$ values (see the Results).